

A New Model for Open Burn Management

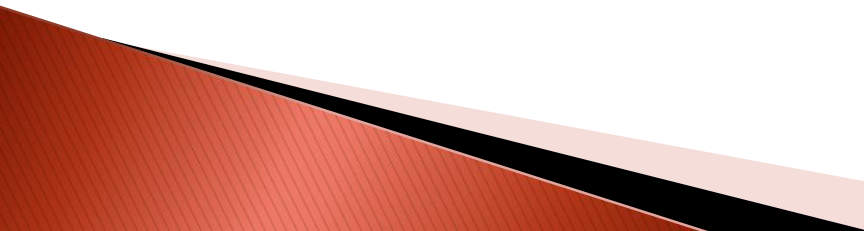
Jason Striker
Routt County Environmental Health Department



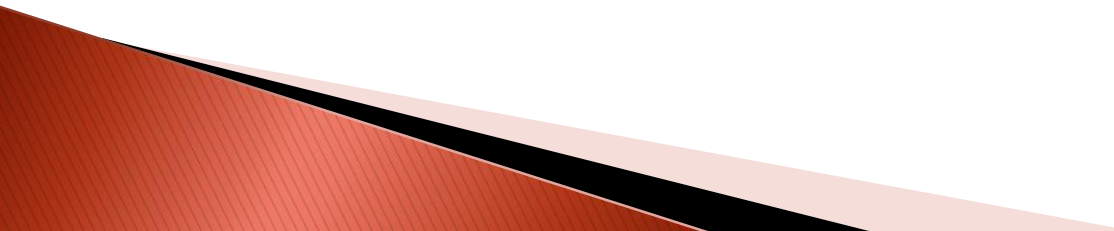
Background

- ▶ In 1996 Routt County received a delegation of authority to administer open burn permits.
- ▶ Since that time Open Burn permits have been issued by Environmental Health for air quality, and a second permit was issued by the local Fire Department to address fire safety issues.
- ▶ Permits have only been issued by Routt County for burns that will be “out cold by sunset”, which has been defined as piles 10x10x10 or smaller. All larger burns have been permitted directly by APCD.

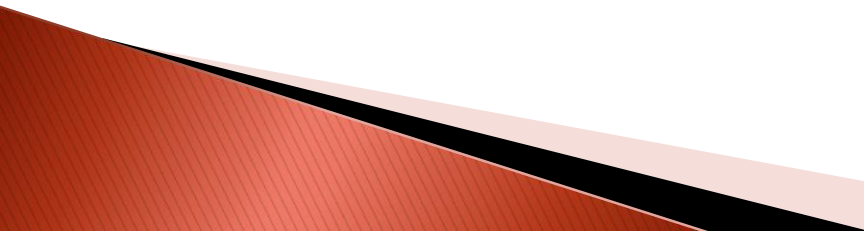
Challenges of the two permit system.

- ▶ The public must work with 3 or 4 separate government agency's in order to burn one pile of wood.
 - ▶ Lack of compliance.
 - ▶ Limited options for enforcement.
 - ▶ Environmental Health only has the personnel to inspect a small number of piles.
 - ▶ Routt County dispatch did not have the means to verify that permits are issued and valid.
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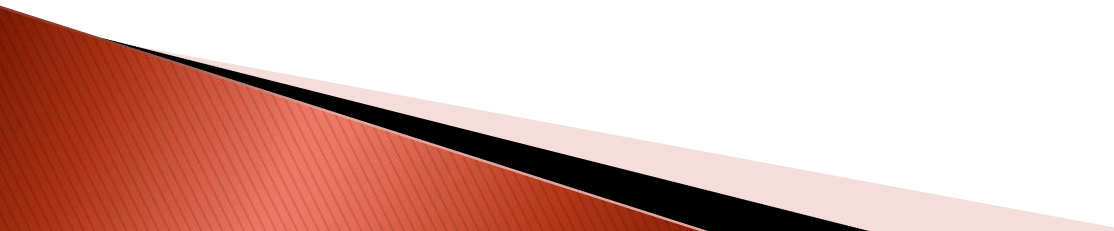
Goal of new permitting system

- ▶ “One Stop Shopping.”
 - ▶ Establish one permit for all types of burns.
 - ▶ New permit process should require only one inspection that covers both fire safety and smoke issues.
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Challenges:

- ▶ How do we create one inspection that looks at fire safety and air quality?
 - ▶ How do we have one agency with the legal authority to issue permits for fire safety and air quality?.
 - ▶ Can we create one permit that addresses all the different types of open burning, from recreational burn all the way up to large forestry open burning?
 - ▶ We have five different fire districts, how can we create one permit that meets the needs of all five districts.
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The Plan:

- ▶ Creation of the “Open Burn Management Plan for Areas of Routt County within the Jurisdictional Boundaries of Fire Districts”
 - ▶ The plan defines the specific rules for open burning.
 - ▶ The rules are based on both International Fire Code and Air Quality Regulations.
 - ▶ The Plan also defines the specific responsibility of the Fire Districts and The Environmental Health Department.
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The Plans “Objective”

- ▶ “The objective of this Open Burn Management Plan (the “Plan”) is to serve as a unified plan for management of open burns throughout the Fire Districts within Routt County as to fire safety and air quality. This Plan will also create a single open burn permit within the Fire Districts that Burn Managers may obtain from the appropriate Fire District.”

Intergovernmental Agreement

- ▶ We created an intergovernmental agreement between Routt County and each individual fire district to permit fires that are being permitted under the counties delegation of authority. (type 2 fires)
- ▶ For larger burns APCD issued individual permits to each district, similar to a permit given to a public lands manager. (type 3 fires)

Burn Day/No Burn Day

- ▶ Under the past permitting system the Burn Manager was responsible for determining appropriate weather conditions for their burn using fireweather.
 - ▶ Under the new system we determined that the fire districts would look at the weather conditions and determine if it was appropriate to allow open burning.
 - ▶ The fire districts then issue a public notice on a daily basis stating if it is a burn day or a no burn day.
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Fireweather for Steamboat:

NWS Denver-Boulder, CO - Fire Wx Table Page - Windows Internet Explorer

http://www.ch.noaa.gov/boulfirewx/fvwpfm/fvwpfm.php?latitude=40.51797520038851&longitude=-107.017822265625&latlon=Golcitylat=%2C%2C&wfo=bou&interface=firewx

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State of CO - Voluntary Con... Suggested Sites Web Slice Gallery

NWS Denver-Boulder, CO - Fire Wx Table Page

09/21-7P	7	0		61	21	21	SW	7	10	4	1			4010	NW	8	28070	P				
09/21-8P	6	0		56	22	26	SE	6	9	4	1			4010	NW	8	28070	P				
09/21-9P	6	0		53	23	31	E	6	6	4	1			171	E	5	684	P				
09/21-10P	5	0		50	24	36	E	6	9	4	1			171	E	5	684	P				
09/21-11P	5	0		48	25	40	E	7	10	4	1			171	E	5	684	P				
FORECAST	SC	PP	CWR	TF	TD	MX	RH	MX	SFC	SFC	G	H	L	10K	10K	MIXG	TRAN	TRAN	VENTL	AJTV	QPF	SNOW
VALID AT	%	%	%	F	F	MN	%	MN	WIND	WIND	S	I	A	WIND	WIND	HGT	WIND	WIND	RATE	RATG	6HRS	6HRS
(MDT)						TF		RH	DIR	MPH	T		L	DIR	MPH	AGL	DIR	MPH	KT-FT		DUR	DUR
09/22-12A	4	0		47	26	44	E	7	10	4	1			104	E	8	728	P			0.00	0.0
09/22-1A	4	0		45	26	48	E	7	10	4	1			104	E	8	728	P				
09/22-2A	4	0		43	27	52	E	8	12	4	1			104	E	8	728	P				
09/22-3A	4	0		42	27	55	E	8	12	4	1			104	E	8	728	P				
09/22-4A	4	0		40	27	59	E	8	12	4	1			104	E	8	728	P				
09/22-5A	3	0		39	27	59	E	8	12	4	1			104	E	8	728	P				
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09/22-8A	3	0		47	28	48	E	7	10	4	1			96	E	8	672	P				
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09/22-10A	4	0		59	28	30	SE	5	5	4	1			1356	E	6	6780	P				
09/22-11A	5	0		64	26	24	S	3	3	4	1			1356	E	6	6780	P				
09/22-12P	6	0		68	25	20	SW	3	3	5	1			9935	W	7	59610	F			0.00	0.0
09/22-1P	6	0		71	23	16	SW	5	5	5	1			9935	W	7	59610	F				
09/22-2P	5	0		74	20	13	W	7	10	5	1			9935	W	7	59610	F				

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Fire Types

- ▶ In order to allow the plan to address the many different types of fires that are permitted, we separated the fires into different “types”
- ▶ Type 1: Recreational Burn.
- ▶ Type 2: Fires that would have previously been permitted by Routt County EH. Fire must be out cold by sunset and smaller than 10x10x10.
- ▶ Type 3: Fires that previously would have been permitted by APCD.
- ▶ Type 4: Fires that exceed the size limitations of type 3, or any fire the Fire Department does not feel comfortable with and therefore would like to refer to APCD.

If both these criteria are met, <u>then it is an approved burn day for these piles¹</u>																										
Fire Danger	Air Quality																									
in burn season based on snow pack and no red flag	any weather	Type 1, bonfires as defined by international fire code																								
in burn season and no red flag	forecasted ventilation of fair or better, or forecasted storm	Type 1 AND Type 2: fewer than 50 piles in entire project each burning piles will be out cold by sunset on the day of ignition maximum dimensions of a pile is 10x10x10 no log in any pile exceeds 12" diameter																								
in burn season and no red flag	forecasted ventilation of good or better, or forecasted snow storm	Type 1 and 2 AND Type 3: <table border="1"> <thead> <tr> <th rowspan="2">Area of Routt County</th><th rowspan="2">Distance to Nearest Neighbor</th><th colspan="2">Largest volume per pile, in cubic feet</th></tr> <tr> <th>grapple (1)</th><th>blade (2)</th></tr> </thead> <tbody> <tr> <td rowspan="2">In Steamboat Springs airshed</td><td>up to 5.0 mi.</td><td>2,000</td><td>500</td></tr> <tr> <td>more than 5 mi.</td><td>7,100</td><td>2,000</td></tr> <tr> <td rowspan="3">NOT in Steamboat Springs airshed</td><td>up to 0.6 mi.</td><td>7,100</td><td>2,000</td></tr> <tr> <td>0.6 - 5.0 mi.</td><td colspan="2">50,000</td></tr> <tr> <td>more than 5 mi</td><td colspan="2">no upper limit</td></tr> </tbody> </table> <p>(1) All slash was lifted into piles, as with a grapple or rake. (2) Some slash was pushed into pile(s), as with a blade</p>		Area of Routt County	Distance to Nearest Neighbor	Largest volume per pile, in cubic feet		grapple (1)	blade (2)	In Steamboat Springs airshed	up to 5.0 mi.	2,000	500	more than 5 mi.	7,100	2,000	NOT in Steamboat Springs airshed	up to 0.6 mi.	7,100	2,000	0.6 - 5.0 mi.	50,000		more than 5 mi	no upper limit	
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in burn season and no red flag	Conditions in permit from CDPHE	Type 1 - 3 AND Type 4: Size and distance combination exceeds Type 3 or Local Fire District determines that the burn requires a state permit.																								

Type 1 Fire:



Type 2 Fire:



Type 3 pile:



Type 4 Pile:



EH Responsibilities

Adhere to and enforce the functions and duties as described in the Delegation of Authority from CDPHE.

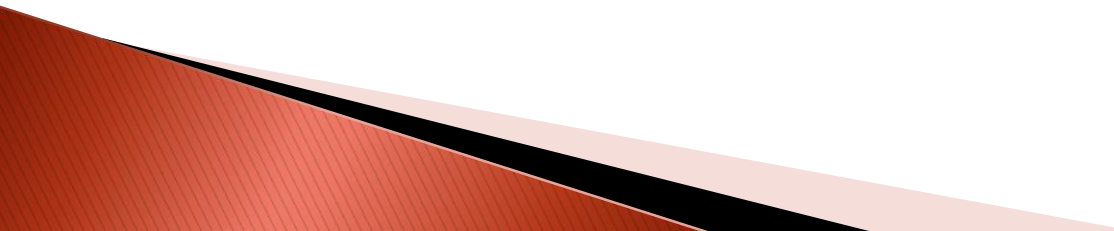
Offer training to the Fire Districts as funding and opportunity for same is available.



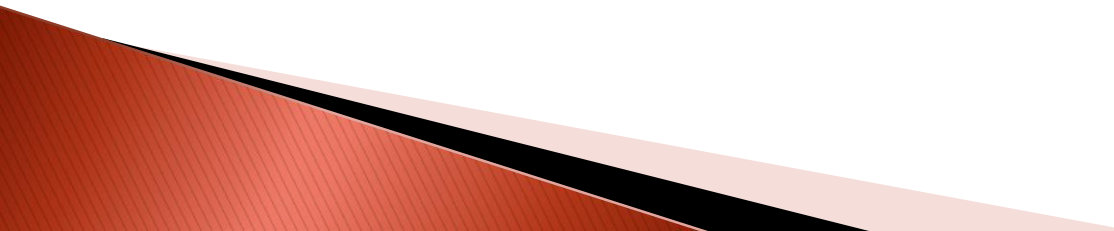
EH Responsibilities

- ▶ Respond to the inquiries of Routt County citizens who may have health-related sensitivities to smoke and provide notice of known open burns to such citizens if requested.

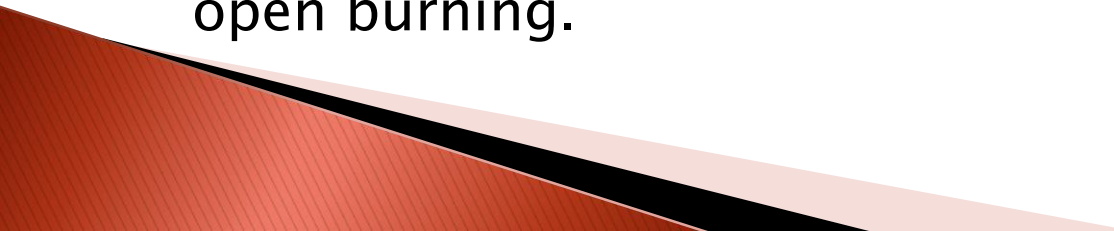
EH Responsibilities

- ▶ Ensure this Plan complies with directives of the Routt County Board of Commissioners and the Routt County Sheriff.
 - ▶ RCDEH shall respond to any smoke related open burning complaints that it receives
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Fire Department Responsibilities

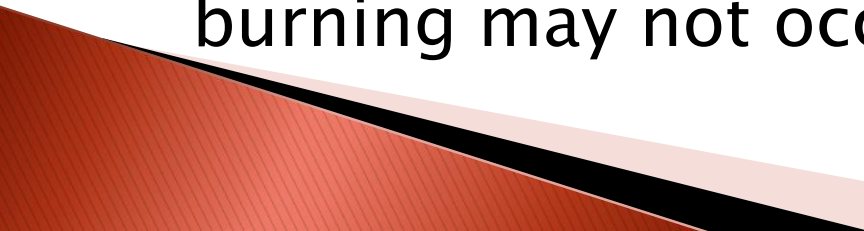
- ▶ Ensure that all chiefs, inspectors, and employees have appropriate and adequate training to implement this Plan.
 - ▶ Issue Open Burn Permits using the forms for permitting open burns as required by RCDEH and/or CDPHE. Permit issuer *must* determine the type of fire on the permit (Type 1, Type 2, or Type 3).
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Fire Department Responsibilities

- ▶ Provide a copy of this Plan or a form containing the Open Burn Rules as described above to the Burn Manager or Open Burn Permit applicant.
 - ▶ Maintain photos of all permitted burns and submit these photos and Open Burn Permits to RCDEH on a monthly basis.
 - ▶ Adhere to and enforce the Open Burn Rules described above.
 - ▶ Adhere to and enforce the International Fire Code as to open burning.
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Fire Department Responsibilities

The Fire District will conduct an inspection of the open burn piles before a permit is issued

- ▶ All open burns within the Steamboat Springs Air Shed will be given a fire Type 1 number higher than in areas outside the Steamboat Springs Air Shed.
 - ▶ The Fire Districts may, at their discretion, establish a burn season outside of which open burning may not occur.
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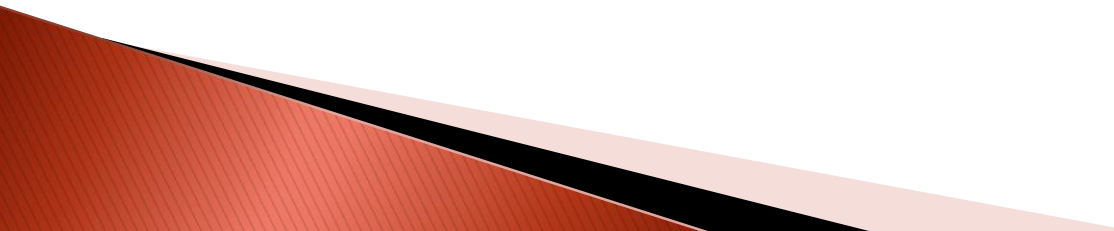
Fire Department Responsibilities

- ▶ Collect, on a daily basis, the atmospheric and other relevant data necessary to determine whether Type 2 or Type 3 fires shall be allowed on that day and issue the appropriate public announcement


Open Burn Rules:

- ▶ 1. The following shall be exempt from these rules and the permitting requirements.
 - Fires for cooking of food.
 - Fires for instructional or recreational purposes (e.g. campfire).
 - Flares to indicate danger to the public.
 - Agricultural Open Burning.
- ▶ 2. All open burns require an Open Burn Permit.

Open Burn Rules:

- ▶ 3. All open burns that meet the criteria of a Type 4 burn require a separate permit issued by CDPHE. The Fire District may, at its discretion, require a permit issued by CDPHE or the RCDEH for any open burn.
 - ▶ 4. No open burns shall be permitted on days when the relevant Fire District has issued a fire danger rating of High, Very High, Extreme or Red Flag Warning has been issued.
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Open Burn Rules:

- ▶ 5. Open burning that is offensive or objectionable because of smoke or odor emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.
 - ▶ 6. Open burning of rubbish, tree stumps, painted or treated wood, dimensional lumber, excessive dirt, construction debris, and demolition debris is prohibited.
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Open Burn Rules:

7. Open burning shall only be performed when time and atmospheric conditions allow for safe burning and adequate ventilation.
8. Open burning shall not be conducted within fifty (50) feet of any structure or other combustible materials, etc:

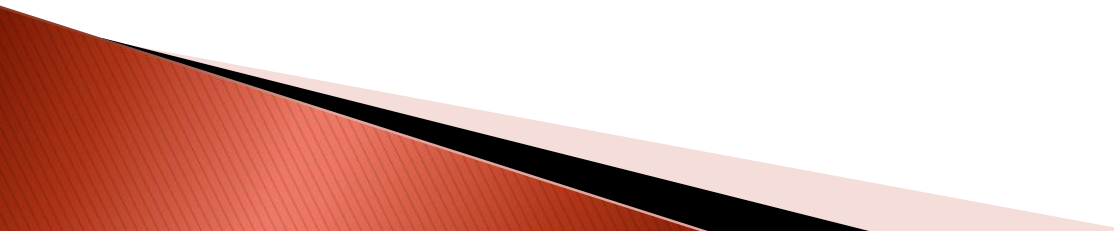
Open Burn Rules:

- ▶ 9. A minimum of one portable fire extinguisher with a minimum 4-A rating or other approved on-site fire extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be readily available for use at open burning sites.

Open Burn Rules:

- ▶ 10. Open burning shall be *constantly* attended by a person knowledgeable in the use of the fire extinguishing equipment required and familiar with the permit limitations as stated on the Open Burn Permit until the fire has been extinguished.
- ▶ 11. Start ignition no *earlier* than 9:00 a.m. Start ignition no *later* than 11:00 a.m., or as allowed by permit (to allow adequate time for the burn to extinguish).
- ▶ 12. Ignite piles only when smoke plume will not reach any occupied neighboring home unless snow is falling.

Open Burn Rules:

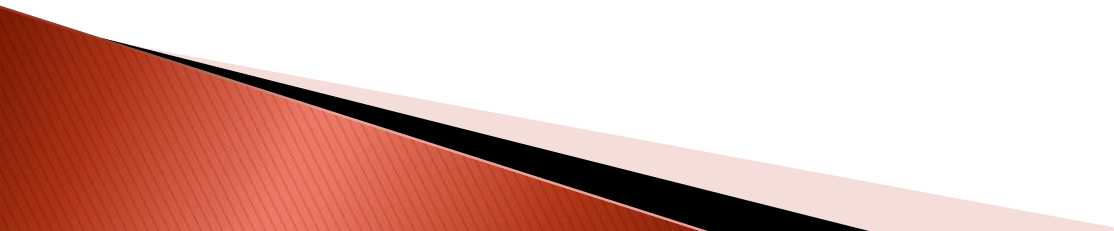
- ▶ 13. Representatives of Routt County Fire Protection Districts are authorized to require that any open burn or recreational fire be immediately discontinued if they determine that the smoke emissions are offensive to occupants of surrounding property or if the open burn is determined to constitute a hazardous condition.
 - ▶ 14. The Open Burn Permit shall be on-site with the person attending the open burn and made available to the authorities when requested.
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Open Burn Rules:

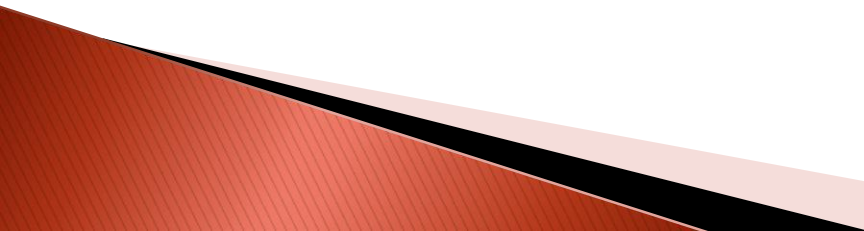
- ▶ 15. Burn Managers shall “chunk” each Type 2 or Type 3 pile at least once.



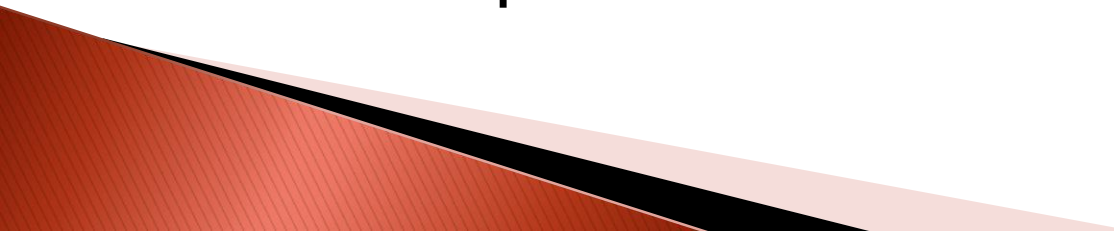
Open Burn Rules:

- ▶ 16. The Burn Manager, on the day of the burn and prior to ignition, must contact the Fire District directly or check the Fire District's notification system to ensure that the type of burn for which the Open Burn Permit applies (Type 2, or Type 3) is allowed.
 - ▶ 17. The Burn Manager must call the Routt County Communications Center on the day of the burn and prior to ignition at (970) 879-1110 and provide their permit number.
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Challenges

- ▶ The two fire districts serving the most rural areas of the county have not signed on to the program at this time. Because these areas are primarily agricultural, there is very little open burning taking place that is not legitimate agricultural burning.
 - ▶ Having the fire districts submit all permits and photos on a monthly basis proved too difficult, so at this point we are having a list of all permits issued submitted, and the permits and photos are available on request.
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How has the program worked so far?

- ▶ We have seen a very large increase in the amount of permitted burns.
 - ▶ The fire districts have been very receptive to training, and have been diligent about issuing permits.
 - ▶ We have gone from inspecting about 6% of piles, to having a trained inspector look at 100% of piles.
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Questions?